FINDING OF NO SIGNIFICANT IMPACT

North Rim Emergency Services/Wildland Fire Facility and Preservation Treatments of Exposed Frame Cabins
Grand Canyon National Park

The National Park Service is proposing to replace an existing kiosk and storage building at the helibase, to construct an emergency services/wildland fire facility, and to preserve (rehabilitate, restore, or reconstruct) historic exposed frame cabins, located on the North Rim of Grand Canyon National Park. The purpose of the proposal is to alleviate problems with current facilities on the North Rim by providing functional, safe, and efficient facilities for helibase support, EMS, and wildland fire services and providing adequate housing for wildland fire crews to promote employee morale, retention of employees, and the ability to recruit new employees. This will be achieved through construction of a 200 square foot building at the helibase, construction of a 10,590 square foot emergency services/wildland fire facility in the administrative area and rehabilitation of exposed frame cabins for seasonal housing. The proposed rehabilitation is needed because:

- The helibase office and material storage are currently housed in a small kiosk and an associated storage building near the existing helibase. These facilities were not designed for their current uses and are insufficient to provide necessary support services for helibase operations.

- Emergency medical services (EMS) operations at the North Rim are currently housed in multiple facilities. The facility that houses the fire engine and ambulance was constructed in the 1930s and is too small for modern equipment. Portions of the fire engine have to be disassembled before it can be stored and reassembled before it can respond to a call. When the vehicles are in the building, there is no room to walk around the vehicles, provide service to the vehicles, or access other equipment in the building. The building is inadequately ventilated and violates National Fire Protection Act (NFPA) standards. Additional EMS operations, including patrol vehicles, a suburban, office space, and equipment caches, are housed in separate facilities, creating an inefficient emergency response system. There is currently no secure holding facility for prisoners, who are held in staff offices.

- The facilities that house the wildland fire program are similarly inadequate. Office space for the wildland fire fighting operation is inadequate, and fire engines must be stored outside, exposed to the elements. Wildland fire personnel are stationed on the North Rim from late March through November. This season is often extended to accomplish fuel reduction projects. These seasonal employees are housed in old trailers or old cabins or are required to live in tents, often in freezing temperatures. During the early spring and late fall months, the ability to accomplish wildland fire projects is limited by the housing that is available. The lack of housing has severely restrained the wildland fire effort on the North Rim and has affected employee retention and the ability of the Park to recruit new employees.

In February 2003 the National Park Service (NPS) prepared an *Environmental Assessment/Assessment of Effect (EA/AEF) for the North Rim Emergency Services/Wildland Fire Facility and Preservation*

Treatments of Exposed Frame Cabins. This EA/AEF, in accordance with the National Environmental Policy Act, analyzes the impacts that will likely result from implementation of the project. The environmental assessment evaluated four alternatives, Alternative A, the No Action Alternative, Alternative B, the agency's preferred alternative, and two additional action alternatives.

PREFERRED ALTERNATIVE

Under the Preferred Alternative, the new emergency services/wildland fire facility will be built adjacent to the existing water storage tanks. The project site is bounded by Arizona Highway 67 to the west and by the water tanks to the east. Approximately half the site has been disturbed by existing utilities and access roads. Site designs include rehabilitation of an existing dirt road to create a paved north access road and construction of parking areas, a service road, and a paved south access road. The facility will be set back approximately 34 m (110 ft) from Highway 67. Dense vegetation between the road and the facility will be retained to screen the building and the existing water tanks from the road, and additional vegetation salvaged from the construction site will be transplanted as screening. Water service at the site consists of underground water lines at the southern edge of the site. The nearest power and sewer utilities are 183 m (600 feet) to the west in the NPS administrative area. Trenching for these utilities will result in disturbance to approximately 0.06 ha (0.14 acre).

Under any of the action alternatives, the following actions will be implemented:

Helibase Support Facility. The old entrance station kiosk and associated storage building will be removed and replaced with a single 18.6-square-m (200-square-foot) building adjacent to the helipad. The new building will accommodate office space and equipment storage. A device to prevent condors from landing on the building will be placed on the roof to discourage condors from visiting the site. The site for the new helibase support facility has been previously disturbed and no vegetation will be removed during construction.

Emergency Services/Wildland Fire Facility. A new emergency services/wildland fire facility will be built. The facility will occupy approximately 984 square m (10,590 square feet) and will have EMS facilities grouped at one end of the building, wildland fire facilities at the other, and shared spaces inbetween. EMS facilities will include storage areas for emergency services vehicles (fire engine, ambulance, patrol cars, and suburban), caches for EMS and search and rescue equipment, men's and women's locker rooms, holding cells, and office space. The wildland fire facilities will include storage areas for vehicles, a fire equipment cache, and office, laboratory, and work spaces. Shared facilities will include offices, a conference room, and maintenance facilities.

Parking at the facility for staff and occasional visitors will accommodate approximately 15 vehicles. Paved areas for parking and roads will occupy approximately 0.4 ha (0.9 acre). The total area of ground disturbed at the site will be approximately 0.8 ha (2.0 acres), and approximately 0.25 ha (0.6 acre) will be revegetated following construction. All utilities will be connected to the facility underground. The utility trench will be 1 meter (3 feet) wide, and the utility corridor will be 3 m (10 feet) wide to accommodate equipment and sidecast materials.

The existing facilities being used for wildland fire and EMS functions will be vacated. The future uses of the buildings have not been determined but are part of on-going Park planning.

Exposed Frame Cabins. The exposed frame cabins are located in the North Rim Inn and Campground Historic District, near the North Rim campground. These buildings were constructed around 1929 and were remodeled in the 1930s and 1960s. There are 26 one-room cabins, a shower facility, and a laundry

facility. These buildings were last used in 1989 and have not been maintained since then. Under all action alternatives, all 28 buildings will be restored (cabins 2, 17, 19, 20, and 25), rehabilitated (cabins 3, 4, 5, 6, 11, 12, 13, 15, 18, 21, 22, 23, 24, 26, and 27 and laundry and shower facilities), or reconstructed (cabins 1, 7, 8, 10, 14, and 16). The extent of efforts necessary to make the buildings functional will vary, depending on the existing condition of each cabin. Restoration will entail maintaining the original historic fabric of the cabins and restoring them to their original condition by replacing damaged elements with materials scavenged from cabins designated for reconstruction. Damaged elements may also be repaired rather than replaced. Cabins that are rehabilitated will be preserved and upgraded. Historic material will be maintained wherever possible, but in-kind replacements will be permissible. Cabins that are scheduled for reconstruction will be preserved by disassembly and reconstruction using as much of the original material as possible. On completion, these cabins will match the appearance of the original structures. All work will be conducted in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and in consultation with SHPO. Exterior modifications will consist of items such as repairing and/or replacing roofs, siding, flooring, windows, and doors. Interior modifications will consist of installing kitchenette units, repairing or replacing bathroom fixtures, and installing indoor water heaters.

Staging Area. Under all action alternatives, minor staging will occur within the construction limits at the site of the emergency services/wildland fire facility, in areas designated for parking lots. The primary staging area will be at Lindbergh Hill, approximately 8 km (5 miles) north of the North Rim developed area along Highway 67. Lindbergh Hill is a large, disturbed area that is used for fire camps. It has electrical utilities on site, and no removal of vegetation will be required. Following construction, the site will be returned to pre-construction conditions.

Mitigation Measures

The mitigation measures listed below are considered part of the preferred alternative and will be followed during project implementation. These actions were developed to lessen the potential for adverse impacts from implementing the preferred alternative, and have proven to be very effective in reducing environmental impacts on previous projects.

Contractor Orientation. Contractors working in the Park are given an orientation concerning proper conduct of operations. This orientation is provided in both written form and verbally at a pre-construction meeting. This policy will continue on proposed projects. Orientation topics will include:

- Wildlife should not be approached or fed.
- Collecting any Park resources, including plants, animals, and historic or prehistoric materials, is prohibited.
- Contractor must have a safety policy in place and follow it.
- Other environmental concerns and requirements discussed elsewhere in this EA will be addressed, including relevant mitigation measures listed below.

Limitation of Area Affected. The following mitigation measures will be implemented to minimize the area affected by construction activities.

- The staging area for the construction office (a trailer), construction equipment, and material storage will be located in previously disturbed areas near the project site. All staging areas will be returned to pre-construction conditions once construction is complete. Standards for this, and methods for determining when the standards are met, will be developed in consultation with the Park Restoration Biologist.

- Construction zones will be fenced with construction tape, snow fencing, or some similar material before any construction activity. The fencing will define the construction zone and confine activity to the minimum area required for construction. All protection measures will be clearly stated in the construction specifications, and workers will be instructed to avoid conducting activities beyond the construction zone as defined by the construction zone fencing.

Soil Erosion. To minimize soil erosion, the following mitigation measures will be incorporated into the action alternatives.

- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods will be used to minimize any potential soil erosion.
- Any trenching operations will be by rock saw, backhoe, trackhoe, and/or trencher, with excavated material side-cast for storage. After trenching is complete, bedding material will be placed and compacted in the bottom of the trench and the utility lines installed in the bedding material. Back filling and compaction will begin immediately after the utility lines are placed into the trench, and the trench surface will be returned to pre-construction contours. All trenching restoration operations will follow guidelines approved by Park staff. Compacted soils will be scarified and original contours reestablished.
- A Salvage and Revegetation Plan will be developed for the project by a landscape architect or other qualified individual, in coordination with the Park Restoration Biologist. Any revegetation efforts will use site-adapted native species and/or native seed, and Park policies regarding revegetation and site restoration will be incorporated into the plan. The plan will consider, among other things, the use of native species, plant salvage potential, exotic vegetation and noxious weeds, and pedestrian barriers. Policy related to revegetation is referenced in NPS Management Policies (NPS 2001b; Chapter 9).

Water Quality. To minimize potential impacts to water quality, the following mitigation measures will be incorporated into the action alternatives.

- A storm water pollution prevention plan (SWPPP) will be developed by the contractor and approved by the Park prior to any ground-disturbing activities. All National Pollutant Discharge Elimination System (NPDES) requirements will be met.
- Standard erosion control measures such as silt fences, sand bags, or equivalent control methods will be used to minimize any potential sediment delivery to streams.

Exotic Vegetation and Noxious Weeds. To prevent the introduction and minimize the spread of exotic vegetation and noxious weeds, the following mitigation measures will be incorporated into the action alternatives.

- Existing populations of exotic vegetation at the construction site will be treated prior to construction activities.
- All construction equipment that will leave the road (e.g., bulldozers and backhoes) will be pressure washed prior to entering the Park.
- The location of the staging area for construction equipment will be Park-approved and treated for exotic vegetation.
- Parking of vehicles will be limited to existing roads or the staging area.
- Any fill, rock, or additional topsoil needed will be obtained from a Park-approved source.
- All areas disturbed by construction will be revegetated using site-adapted native seed and/or plants.

Special Status Species. To protect any unknown or undiscovered threatened, endangered, or special status species, the construction contract will include provisions for the discovery of such. These provisions will require the cessation of construction activities until Park staff evaluate the project impact on the discovery and will allow modification of the contract for any protection measures determined necessary to protect the discovery. Mitigation measures for known special status species are as follows:

California Condor

- Prior to the start of a construction project, the Park will contact personnel monitoring California condor locations and movement within the Park to determine the locations and status of condors in or near the project area.
- If a condor occurs at the construction site, construction will cease until it leaves on its own or until permitted personnel employ techniques that result in the individual condor leaving the area.
- Construction workers and supervisors will be instructed to avoid interaction with condors and to contact the appropriate Park or Peregrine Fund personnel immediately if and when condor(s) occur at a construction site.
- The construction site will be cleaned up at the end of each day that work is being conducted (i.e., trash disposed of, scrap materials picked up) to minimize the likelihood of condors visiting the site. Park condor staff will complete a site visit to the area to ensure adequate clean-up measures are taken.
- To prevent water contamination and potential poisoning of condors, a vehicle fluid-leakage and spill plan will be developed and implemented for this project. This plan will be reviewed by the Park biologist for adequacy in addressing condors.
- If a new structure occurs on the rim or above tree line in other areas, there may be a need to install condor deterrent devices on the structure. This will be evaluated on a case-by-case basis by the Park wildlife biologist.
- If non-nesting condors occur within 1 mile of the project area, blasting will be postponed until condors leave or are hazed by permitted personnel.
- If condor nesting activity is known within 1 mile of the project area, then blasting activity will be restricted during the active nesting season. The active nesting season is February 1 to September 30. These dates may be modified based on the most current information, in consultation with the Park biologist and the USFWS.
- If condor nesting activity is known within 0.5 mile of the project area, then light and heavy construction in the project area will be restricted during the active nesting season. The active nesting season is February 1 to September 30. These dates may be modified based on the most current information, in consultation with the Park biologist and the USFWS.

Mexican Spotted Owl (MSO)

- If a construction project occurs within a Protected Activity Center (PAC) with no known nest site, all construction activity will be restricted to the non-breeding season (September 1 – February 28). However, if the project in a PAC is at least 0.8 km (0.5 mile) from known nest sites and the project does not include blasting, the project can be implemented during the breeding season. The breeding season is March 1 – August 31.
- If a construction project outside of PACs occurs within 1.6 km (1 mile) of a known PAC nest or roost site, the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then all blasting in that project area will be restricted to the non-breeding season (September 1 – February 28).

- If a construction project outside of PACs occurs within 0.8 km (0.5 mile) of a known PAC nest or roost site, the boundary of a PAC where the nest or roost site is not known, or unsurveyed restricted, protected, or predicted MSO habitat, then light and heavy construction activity in that project area will be restricted to the non-breeding season (September 1 – February 28).

Cultural Resources. To minimize the impacts of construction activities on cultural resources, the following mitigation measures will be incorporated into the action alternatives.

- If presently unidentified archeological resources are discovered during the course of the project, work in that location will stop until the resources are properly recorded by an NPS archeologist and evaluated under the eligibility criteria of the National Register of Historic Places. If (in consultation with the Arizona State Historic Preservation Office) the resources are determined eligible, appropriate measures will be implemented either to avoid further resource impacts or to mitigate their loss or disturbance. In compliance with the Native American Graves Protection and Repatriation Act of 1990, the NPS will also notify and consult concerned tribal representatives for the proper treatment of human remains or funerary and sacred objects should these be discovered during the course of the project.
- All undertakings affecting historic buildings and structures will be carried out in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (60 FR 35842-35844) and other applicable NPS cultural resources policies and guidelines.

Viewscapes. To minimize visual impacts, mitigation measures will include the following:

- Clearing of forested areas will be limited to the immediate construction zone associated with trenching and other construction. Construction tape or snow fencing will surround the established construction zone to minimize damage to vegetation and other features by construction equipment and to define access to the construction site.
- Alignment of utility corridors will be located where possible through existing open clearings in forested areas. Trench locations will be placed perpendicular to roadways to create as short a duration of viewing time for visitors to the disturbed area as possible.
- Trenching for underground utilities will be limited as much as possible to a 10-foot wide fenced construction zone. Clearing of trees and understory will be feathered to blend with natural openings in the forest canopy.
- Natural, muted colors will be used to blend any metal surfaces into the landscape.
- All contractors will use Lindbergh Hill for primary staging to minimize ground disturbance and to decrease the amount of construction equipment visible to visitors.

Visitor Experience. The following mitigation measures will be incorporated into the action alternatives to minimize the impacts of construction activities on the visitor experience:

- Unless otherwise approved by the Park, construction activities will not occur on Saturdays, Sundays, or holidays to minimize disruption to visitors during peak days.
- Traffic in any one direction will not be stopped for more than 15 minutes to minimize disruption to traffic flow.
- Unless otherwise approved by the Park, construction activities will be restricted to 8:00 am to 6:00 pm in the summer (May 1- September 30) and to 9:00 am to 5:00 pm during the rest of the year.
- Information regarding implementation of this project and other foreseeable future projects will be shared with the public upon their entry into the Park during construction periods.

This may take the form of an informational brochure or flyer distributed at the gate and sent to those with reservations at park facilities, postings on the Park's website, press releases, and/or other methods.

Park Operations. The following mitigation measures will be incorporated into the action alternatives to minimize the impacts of construction activities on park operations:

- An independent contract inspector will be hired so Park staff will not be responsible for monitoring day-to-day contract compliance.

Air Quality. Air quality impacts of the action alternatives are expected to be temporary and localized. To minimize these impacts, the following actions will be taken:

- To reduce entrainment of fine particles from hauling material, sufficient freeboard will be maintained and loose material loads (aggregate, soils, etc.) will be tarped.
- To reduce tailpipe emissions, construction equipment will not be left idling any longer than is necessary for safety and mechanical reasons.
- To reduce construction dust in the short-term, water will be applied to problem areas. Equipment will be limited to the fenced project area to minimize soil disturbance and consequent dust generation.
- Landscaping and revegetation will control long-term soil dust production. Mulch and the plants themselves will stabilize the soil and reduce wind speed/shear against the ground surface.

ALTERNATIVES CONSIDERED

The EA/AEF evaluated four alternatives in detail for addressing the purpose and need for action; The No Action alternative, the Preferred Alternative and two additional action alternatives. The preferred alternative is as described previously in this document in detail.

Alternative A – No Action Alternative: The No-Action Alternative will maintain the existing conditions at the North Rim and provides the baseline for comparison with the action alternatives. Past and present activities that have affected the Bright Angel Peninsula and the surrounding area include the Outlet Fire, prescribed fire, and existing development and visitation at the North Rim. Existing developments (roads, trails, parking areas, buildings, and utilities) have affected approximately 95 ha (234 acres) within the Bright Angel Peninsula sub-unit of the Bright Angel watershed. The North Rim receives most of its visitation between May and October, when facilities at the North Rim are open. Visitation peaks in the summer months of June and July and is very limited in winter when snow blocks the road. Park staff is present at the North Rim throughout the year and perform general maintenance functions. The Outlet Fire burned approximately 5,666 ha (14,000 acres) on the North Rim in May 2000. Approximately 1,526 ha (3,772 acres) of the burn occurred in the Bright Angel Peninsula sub-unit. The fire burned in a mosaic pattern, with areas of low, moderate, and high burn severities throughout the fire perimeter. Prescribed burning has been conducted on 892 ha (2,203 acres) within the watershed sub-unit since 1997.

Under the No-Action Alternative, no new facilities for helibase support, emergency services, or wildland fire will be constructed. Office space and storage facilities for the helibase will continue to be housed in inadequate facilities. Emergency services operations will remain housed in several locations, including buildings 118 (fire management office), 119 (patrol office and ranger office), 125 (holding facility/gas station), 126 (fire house), and 171 (fire cache). The ambulance and fire engine will remain in a facility (building 126) that violates NFPA standards. Prisoners will continue to be held in staff offices. Wildland fire crews will continue to be housed in old cabins or old trailers or will be required to live in tents.

Alternative C – Generator Site. The emergency services/wildland fire facility will be built at the north end of the administrative area, immediately north of the generator building (No. 1488). The site is within 61 m (200 feet) of water, sewer, and electrical utilities. Trenching for these utilities will disturb approximately 0.02 ha (0.05 acre). Site designs include a single paved access road to Highway 67 and a second paved access road connecting to the existing access road to the water treatment plant. The building will be approximately 46 m (150 feet) from the highway and will be in a direct line of sight to southbound traffic entering the North Rim developed area on Highway 67. The facility will be partially screened by existing vegetation for northbound traffic. Vegetation will be planted to provide additional screening. Approximately half the site has been disturbed by previous developments. A portion of the facility site will be within the North Rim Headquarters Historic District.

Alternative D – Administrative Site. The emergency services/wildland fire facility will be built approximately 46 m (150 feet) to the west of Highway 67, between the road and the administrative area. Site designs include construction of paved access roads to the north and south and paved parking areas. The site is 30 m (100 feet) from water service, 91 m (300 feet) from sewer lines, and 61 m (200 feet) from electrical utilities. Trenching for these utilities will disturb approximately 0.06 ha (0.14 acre). The site is adjacent to and within sight of the North Rim Headquarters Historic District, and little vegetation exists between the site and the highway that will screen the facility. Vegetation will be planted to provide screening from the road. The site is undisturbed except for existing utility corridors.

The EA/AEF also includes a discussion of several other alternatives considered but dismissed from detailed analysis. Several different designs for the emergency services/wildland fire facility were considered. These designs included separate buildings for the EMS and wildland fire functions and various layouts for a single building. These designs were eliminated because of design inefficiencies or excessive square footage required.

Three alternatives in addition to rehabilitating the exposed frame cabins were considered for housing the wildland fire crew. All three alternatives consisted of constructing new housing at various locations. These alternatives were dismissed during the value analysis study for the North Rim wildland fire crew quarters because new construction will involve more site disturbance and increased maintenance efforts and because rehabilitating historic structures will demonstrate the Park's commitment to historical preservation.

A Cultural Landscape Report (CLR) is currently being prepared for the North Rim Bright Angel Peninsula Developed Area. The purposes of the CLR are to identify, document, analyze, and evaluate contributing and non-contributing cultural landscape characteristics within the cultural landscape and to provide specific recommendations and comprehensive vision for the landscape to guide long-term management. Once completed, the CLR will serve as a supporting document for implementation of the GMP. The draft CLR provides specific recommendations for the location of the emergency services/wildland fire facility identified under the preferred alternative. The CLR states that the site proposed under Alternative B is not a major contributor to the significance of the study area and that the site is preferable to other locations because it is disturbed. However, the CLR recommends that the site be developed as unobtrusively as possible and as much existing vegetation as possible be retained between the new facility and the entrance road. The CLR also offers a recommendation to realign the angle of the proposed entrance roads so that the facility is not as easily seen by visitors traveling on the entrance road:

> "It is recommended that, if feasible, the alignment of the road be modified and part of the old bed revegetated to block the view of the facility. Likewise, if the design of the new east entrance

drive to the facility could be slightly realigned to block potential views into the garage and vehicle parking area from the Entrance Road corridor."

This recommendation was considered but ultimately dismissed. The proposed entrance drives are existing dirt roads and/or open areas void of trees. Using these alignments minimizes the amount of new ground disturbance and tree removal that will be required for the entrance roads. The existing road alignments are also at an angle conducive to the maneuverability of large fire trucks. While the alignment of the roads could be shifted and made to be more perpendicular to Highway 67, this will require tree removal and ground disturbance in an area that has a relatively high density of trees. This alignment change will not adequately accommodate large fire trucks coming into and out of the facility. Changing the alignment of the entrance drives to minimize the visibility of the building from the Entrance Road will require planting trees and other vegetation in the existing proposed alignment along the dirt road on the northwest end and the open corridor on the southeast end. Revegetation can be successful and is used for many projects within the park to maximize native ground cover in disturbed areas. Revegetation for use as screening can also be successful, but will require a long period of time for small trees to grow to appropriate heights and for vegetation to be dense enough to hide a large structure such as the proposed facility. For these reasons, the recommendation made in the draft CLR to realign the roads into the proposed facility was dismissed. Other recommendations, such as retaining as much vegetation as possible between the building and Highway 67, using muted exterior colors for the building, and avoiding use of shiny metal surfaces will be implemented and are expected to minimize the potential for adverse impacts to the cultural landscape.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

NPS policy requires identification of an environmentally preferred alternative. The environmentally preferred alternative is determined by applying the criteria suggested in NEPA, which is guided by the CEQ. The CEQ provides direction that "[t]he environmentally preferred alternative is the alternative that would promote the national environmental policy as expressed in NEPA's Section 101:"

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all generations safe, healthful, productive, and esthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
5. Achieve a balance between population and resource use that will permit high standard of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depleted resources.

Alternative A (No Action) will not address inadequacies in the current emergency response system at the North Rim and will not contribute to the preservation of existing historic structures. Therefore, Alternative A will not fulfill criteria 2 and 4.

Alternative B will fulfill criterion 2 by addressing current inadequacies in the emergency response system and providing a design for the Emergency Services/Wildland Fire facility that will not result in traffic hazards on the entrance road or conflicts between visitor and emergency traffic. Alternative B will also fulfill criterion 4 by applying preservation treatments to existing historic structures and avoiding any adverse impacts to historic districts.

Alternative C will address inadequacies in the current emergency response system but will create a traffic hazard on the entrance road. Therefore, Alternative C will only partially fulfill criterion 2. Although Alternative C will apply preservation treatments to existing historic structures, it will also have an adverse impact on the North Rim Headquarters Historic District and thus will only partially fulfill criterion 4.

Alternative D will address inadequacies in the current emergency response system but could create confusion for visitors trying to reach the backcountry office. Therefore, Alternative C will only partially fulfill criterion 2. Although Alternative D will apply preservation treatments to existing historic structures, it will also have an adverse impact on the North Rim Headquarters Historic District and thus will only partially fulfill criterion 4.

Alternative B will avoid adverse impacts to historic properties, provide for preservation treatments of historic structures, and provide for improved emergency services and wildland fire facilities without creating long-term hazards or confusion for visitors. Alternatives A, C, and D will be lacking in one or more of these areas. Because Alternative B will fulfill the criteria above more completely than the other alternatives, it is the environmentally preferred alternative.

WHY THE PREFERRED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

As defined in 40 CFR §1508.27, significance is determined by examining the following criteria:

Impacts that may be both beneficial and adverse. As fully discussed in the Environmental Assessment, the preferred alternative will not affect geology; topography; prime and unique agricultural land; air quality; floodplains; wetlands; local or regional socioeconomics; minorities or low-income populations or communities; nor soundscape.

Implementation of the preferred alternative will result in negligible, adverse short- and long-term impacts to soil and water resources through soil compaction and displacement, increases in impermeable surfaces and potential increases in soil erosion.

Implementation of the preferred alternative will result in negligible, adverse short-term impacts to biotic communities through disturbance during construction. Modification of ponderosa pine/white fir habitat will result in minor, adverse long-term impacts to biotic communities.

Implementation of the preferred alternative will result in negligible, adverse long-term impacts to exotic vegetation and noxious weeds through increased potential for spread of noxious weeds on disturbed ground.

Implementation of the preferred alternative will result in minor, beneficial long-term impacts to viewscapes through preservation treatments of exposed frame cabins. The new emergency services/wildland fire facility will result in moderate, adverse long-term impacts to viewscapes.

Implementation of the preferred alternative will result in negligible, adverse long-term impacts to Northern goshawk and American peregrine falcon. Implementation of the preferred alternative will result in minor, adverse long-term impacts to Kaibab squirrel.

For purposes of Section 7 consultation under the Endangered Species Act, implementation of the preferred alternative may affect, but is not likely to adversely affect, the Mexican spotted owl or

California condor. Concurrence on these determinations was received from the U.S. Fish and Wildlife Service on 9 July 2002 and on 24 April 2003.

After applying the Advisory Council on Historic Preservation's criteria for adverse effects (36 CFR, Part 800.5, Assessment of Adverse Effects), the National Park Service determines that the emergency services/wildland fire facility will have no effect on identified historic properties.

After applying the Advisory Council on Historic Preservation's criteria for adverse effects (36 CFR, Part 800.5, Assessment of Adverse Effects), the National Park Service determines that implementation of preservation treatments of the exposed frame cabins will have no adverse effect on identified historic properties. Concurrence on this determination from the State Historic Preservation Office was received on 23 May 2003.

Degree of effect on public health or safety. The EA/AEF evaluated impacts to park operations and visitor experience. This evaluation determined that implementation of the preferred alternative will result in minor, adverse short-term impacts to visitors due to increased noise and traffic delays and congestion during construction. It also determined that implementation of the preferred alternative will result in moderate, beneficial, long-term impacts to park operations due to increased efficiency, decreased maintenance needs. Because the facilities addressed in this project are not visitor facilities, direct impacts on the public are relatively minor. Impacts to visitor safety will primarily be the result of short-term impacts during construction of the facilities. Adherence to mitigation measures designed to minimize safety risks and adverse impacts to visitor experience during project implementation should address these limited risks. Safety risks associated with use of the existing old buildings for emergency services and administrative functions that are not up to current codes will be eliminated with implementation of the preferred alternative, benefiting the safety and health of park employees.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. As fully discussed in the EA/AEF, geology, topography, prime and unique agricultural land, air quality, floodplains, wetlands, local or regional socioeconomics, minorities or low-income populations or communities, and soundscape will not be affected by implementation of the preferred alternative. No wild and scenic rivers are designated near the North Rim and none will be affected by implementation of the preferred alternative.

The site of the proposed emergency services/wildland fire facility at the water tanks is considered critical habitat for the Mexican spotted owl (MSO). MSO surveys have occurred repeatedly on the North Rim over the last several years. The most recent surveys of the project area in 2001 and 2002 did not locate any MSO. While habitat suitable for nesting and roosting is present below the rim edge near the proposed project site, this habitat has been surveyed to protocol and is at present unoccupied. The nearest known occupied habitat is greater than 1 mile southwest of the project area. Potential adverse impacts of disturbance of habitat at the project site are minimized by the fact that surveys have been conducted and no MSO have been detected; that the site is small, transitions into ponderosa pine habitat nearby and is located near the developed area and roadway, and that the nearest known occupied habitat is greater than 1 mile away. Although habitat in this area will be affected, the U.S. Fish and Wildlife Service has concurred with the Park that implementation of the preferred alternative is not likely to adversely affect MSO or its habitat.

The historic exposed frame cabins are located within the North Rim Inn and Campground Historic District. The North Rim Inn and Campground District was listed on the National Register of Historic Places in 1982. The preservation treatments proposed for the cabins will be conducted in full compliance with Director's Order 28 (Cultural Resources Management Guideline) and the Secretary of the Interior's

Standards for the Treatment of Historic Properties (Weeks 1995). The National Park Service determines that implementation of the preferred alternative will result in a "no adverse effect to historic properties" determination. Concurrence on this determination from the State Historic Preservation Office was received on 23 May 2003.

Consultation with concerned tribal officials, Arizona State Historic Preservation Officer, and U. S. Fish and Wildlife Service has been completed.

Degree to which effects on the quality of the human environment are likely to be highly controversial. There were no highly controversial effects identified during either preparation of the EA/AEF or the public review period.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks. There were no highly uncertain, unique or unknown risks identified in the EA/AEF or during the public review period.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The existing facilities being used for wildland fire and emergency services functions will be vacated. These facilities include the existing fire management office (building 118), patrol office and ranger office (building 119), holding facility/gas station (building 125), fire house (building 126), fire cache (building 171) and bay (building 126). The future uses of these buildings have not been determined but are part of on-going park planning, as part of the North Rim Development Plan. The preferred alternative neither establishes a precedent for future actions with significant effect nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Impacts of the preferred alternative identified in the EA/AEF were to soils and water, biotic communities, exotic vegetation and noxious weeds, special status species, cultural resources, viewscapes, visitor experience and park operations. As described in the environmental assessment, a variety of past, present, and reasonably foreseeable future actions have affected or may affect resources in the Bright Angel watershed subunit. Implementation of the preferred alternative in combination with past, present and reasonably foreseeable future actions will result in impacts to resources that range from negligible to moderate.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. The exposed frame cabins occur within the North Rim Inn and Campground Historic District. These are sensitive cultural resources and have been carefully considered throughout the planning process for this project, as documented in the Environmental Assessment/ Assessment of Effect for this project. The State Historic Preservation Office has concurred with the Park's determination that implementation of the preservation treatments for the exposed frame cabins will not adversely impact historic properties. Other aspects of the project will have no effect on identified historic properties.

All project areas have had previous archeological survey and the potential for impacts to archeological sites is minimal. Consultation with the concerned tribal officials has been completed.

If previously unknown archeological resources are discovered during construction, all work in the immediate vicinity of the discovery will be halted until the resources are identified and documented. An appropriate mitigation strategy, if necessary, will be developed in consultation with the Arizona State Historic Preservation Office and concerned tribal officials.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat. The California condor was listed as an endangered species in 1967. A nonessential, experimental population of California condors has been established in Northern Arizona, and within Grand Canyon National Park the condor has the full protection of a threatened species. It has been determined by park staff that implementation of the preferred alternative "may affect, but is not likely to adversely affect" the California condor. This determination is based on the potential that condors could be attracted to the increased activity at the project site during construction. Mitigation measures have been developed jointly between park staff and the U.S. Fish and Wildlife Service (FWS) to minimize the potential for adverse impacts to the condor during project implementation. These measures are included as part of the proposed action and identified under the preferred alternative. The FWS has been consulted and concurred with the determination that condors may be affected, but are not likely to be adversely affected by the implementation of the preferred alternative.

The Mexican spotted owl was listed as a threatened species in 1993 and parts of Grand Canyon National Park were designated as critical habitat in 2001. It has been determined by park staff that implementation of the preferred alternative "may affect, but is not likely to adversely affect" MSO. This determination is based on the fact that the proposed site of the new facility occurs within spotted owl critical habitat, but that owls have not been detected in the project area, and the nearest Protected Activity Center is greater than 0.5 miles away. Mitigation measures have been developed jointly between park staff and the U.S. Fish and Wildlife Service (FWS) to minimize the potential for adverse impacts to the MSO during project implementation. These measures are included as part of the proposed action and identified under the preferred alternative. The FWS has been consulted and concurred with the determination that MSO may be affected, but are not likely to be adversely affected by implementation of the preferred alternative.

Whether the action threatens a violation of Federal, state or local environmental protection law. The preferred alternative violates no federal, state, or local environmental protection laws.

IMPAIRMENT OF PARK RESOURCES OR VALUES

In addition to determining the environmental consequences of the preferred and other alternatives, National Park Service policy (*Management Policies*, 2001) requires analysis of potential effects to determine whether or not actions will impair park resources. The fundamental purpose of the National Park System, established by the Organic Act and reaffirmed by the General Authorities Act as amended, begins with a mandate to conserve park resources and values. National Park Service managers must always seek ways to avoid, or to minimize to the greatest degree practicable, adverse impacts on park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resources and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the National Park Service must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the responsible National Park Service manager, will harm the integrity of park resources or values, including the opportunities that otherwise will be present for the enjoyment of those resources or values. Impairment may result from National Park Service activities in managing the park, visitor activities, or activities undertaken by concessionaires, contractors, and others operating in the park. An impact to any park resource or value may constitute impairment. An impact will be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Because there will be no major adverse impacts to a resource or value whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation or proclamation of Grand Canyon National Park; (2) key to the natural or cultural integrity of the park; or (3) identified as a goal in the park's general management plan or other relevant National Park Service planning documents, there will be no impairment of Grand Canyon National Park's resources or values as a result of implementation of the preferred alternative.

PUBLIC INVOLVEMENT

A public scoping letter for several projects including the emergency services and wildland fire facility was sent to a mailing list of approximately 325 people on November 29, 2000. None of the responses to this letter addressed the emergency services building or the wildland fire facility. A second scoping letter on a combined emergency services/wildland fire facility and preservation treatments of exposed frame cabins was issued on July 26, 2002. A press release was also issued and the scoping letter was posted on the park's website. Responses to this letter were received from the Navajo Nation Historic Preservation Department and the Southwest Utah Five County Association of Governments, neither of which had any concerns with the project. Two members of the public responded, requesting to receive a hard copy of the EA.

The environmental assessment was made available for public review and comment during a 30-day period ending March 21, 2003 through a combination of direct mailing, issuance of a press release and posting on the park's website. One response was received from an individual in Utah. The letter raised several concerns with the preferred alternative including disagreement with new construction on the North Rim, use of exposed frame cabins for housing instead of visitor lodging and posed a question regarding proposed holding cells in the emergency services/wildland fire facility. The Park responded in writing to this letter, addressing the individual's concerns. These comments are also addressed in the errata sheet attached to this Finding of No Significant Impact (FONSI).

NPS staff met with personnel from U.S. Fish and Wildlife Service (USFWS) and Arizona Game and Fish Department on 13 December 2000 to discuss this project proposal and other future proposals. NPS staff met with USFWS several times between March and June 2002 to discuss this project proposal in conjunction with a batch consultation for several construction projects throughout the Park. Concurrence on the batch consultation was received from USFWS on 9 July 2002 and indicated that the projects, including the rehabilitation of the exposed frame cabins, may affect, but are not likely to adversely affect, the Mexican spotted owl and the California condor. Consultation with USFWS regarding the emergency services/wildland fire facility and the helibase support facility was conducted separately. Concurrence on this portion of the project was received on 28 April 2003.

Consultation between the NPS and the State Historic Preservation Officer (SHPO) on this project is complete. Concurrence was received on 23 May 2003. SHPO issued a support letter regarding the preservation treatments of the exposed frame cabins on 13 March 2002. The emergency services/wildland fire facility and the exposed frame cabins were discussed at a meeting with SHPO on 16 October 2002 and 20 February, 2003.

CONCLUSION

The preferred alternative does not constitute an action that normally requires preparation of an environmental impact statement (EIS). Negative environmental impacts that could occur are negligible to moderate in effect. There are no unmitigated adverse impacts on public health, public safety, threatened or endangered species, sites or districts listed in or eligible for listing in the National Register of Historic Places, known ethnographic resources, or other unique characteristics of the region. No highly uncertain or controversial impacts, unique or unknown risks, cumulative effects, or elements of precedence were identified. Implementation of the action will not violate any federal, state, or local environmental protection law.

Based on the foregoing, it has been determined that the project does not constitute a major federal action significantly affecting the quality of the human environment and an EIS will not be required for this project and thus will not be prepared.

Recommended: _____ 5-29-03
Jeffrey Cross — Date
Science Center Director, Grand Canyon National Park

Recommended: _____ 2 JUNE 2003
Joseph F. Alston — Date
Superintendent, Grand Canyon National Park

Approved: _____ 6/05/03
Karen P. Wade — Date
Intermountain Regional Director

ERRATA SHEET

Grand Canyon National Park

The NPS received one letter in response to our request for comments on the North Rim Emergency Services/Wildland Fire Facility and Preservation Treatments of Exposed Frame Cabins (February 2003). The comment period ended March 21, 2003. An interdisciplinary team reviewed the letter to identify any substantive comments. Substantive comments were considered to be comments which:

- question, with reasonable basis, the accuracy of information in the EA.
- question, with reasonable basis, the adequacy of environmental analysis.
- present reasonable alternatives other than those presented in the EA.
- cause changes or revisions in the proposal.

No substantive comments, as defined above, were received. Two comments presented in the letter suggested alternatives other than those presented in the EA/AEF. These alternatives, however, were not considered reasonable. These comments are listed below with the NPS response. In addition, a small error in the EA/AEF was discovered by park staff during the public comment period. This comment is also listed below with documentation of how it was addressed.

***Comment**:* No new construction on the North Rim; reuse existing facilities before construction of new facilities

> ***Response**:* The existing buildings that currently house the emergency services and wildland fire programs, as stated in the EA/AEF, are inadequate for these current uses. Most of these buildings are historic and were not designed for parking modern emergency vehicles and fire trucks. To rehabilitate these buildings within the National Fire Protection Act standards while meeting the needs of vehicles of current technology and design will be extremely difficult. As also stated in the EA/AEF, operational support, offices and equipment caches are housed in separate facilities, which creates an inefficient emergency response system. Rehabilitation of these existing structures for emergency services and wildland fire programs will not be feasible and will not meet the purpose of and need for the proposed action, as described in the EA/AEF. NPS believes that reuse of existing historic buildings instead of constructing a new building to meet the needs of the current program is not a reasonable alternative.

***Comment**:* Using exposed frame cabins proposed for rehabilitation for visitor lodging

> ***Response**:* Visitor lodging and housing needs were topics included in the 1995 Grand Canyon National Park General Management Plan (GMP). The GMP identifies that four to six of the exposed frame cabins will be adaptively reused as visitor lodging. Upon further analysis, NPS has determined that rehabilitation of all of the exposed frame cabins will serve both to preserve historic buildings and to provide much-needed housing, as stated in the EA/AEF. Rehabilitating all 26 cabins and using them for employee housing, instead of visitor lodging, addresses the more pressing need of housing and not visitor lodging. Use of the cabins partially serves the need identified in the GMP for construction of approximately 270 housing units (page 48 of the GMP) and will preclude the need to construct separate fire crew quarters, an idea that was preliminarily considered by Park management. The GMP identifies 20 cabins at the Grand Canyon Lodge and Inn, used now as employee housing, which will be converted to visitor lodging. This proposal is currently being evaluated, as part of the North Rim development planning process to determine its feasibility. Therefore, NPS believes that using the exposed frame cabins for employee housing addresses the purpose and need for the

proposed action, as described in the EA/AEF. NPS believes that use of these cabins for visitor lodging is not a reasonable alternative at this time.

***Comment**:* On page 14, the EA/AEF states that "Cabins that are rehabilitated would be preserved and upgraded to year-round habitability" while on page 1 of the EA/AEF it states that there is a seasonal housing shortage and that housing is needed in the spring and late fall months (not year-round). This is a discrepancy in the document. Utilities cannot be provided to the cabins year-round and the park does not intend to use them year-round following rehabilitation

Response: This statement on page 14 of the EA/AEF has been changed to "Cabins that are rehabilitated would be preserved and upgraded to provide habitability during spring, summer and fall seasons."

***Comment**:* Concurrence was received from the State Historic Preservation Office on May 23, 2003. While they expressed their concurrence on the determination of effects for both the emergency services/wildland fire facility and the exposed frame cabins in their response, they also asked a few questions and offered some comments related to the proposed design for the rehabilitation of the exposed frame cabins.

Response: Both the Park's Project Manager for this project and the Park's Historical Architect have reviewed the questions and minor comments in the 23 May 2003 concurrence letter. Both have agreed that these comments are valid and that they will be addressed during the subsequent design phases for the rehabilitation of the exposed frame cabins.